POSITIVE SOLUTIONS OF SMALL NORM TO
A QUASILINEAR ELLIPTIC INCLUSION PROBLEM

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1. Introduction. In this paper we consider the inclusion system

$$(S) \qquad \begin{cases} u'(r) \in \psi(v(r)), \\ -(av)'(r) \in b(r)f(u(r)), \end{cases} \qquad r > 0,$$

with initial values

$$u(0) = u_0, \quad \text{and} \quad v(0) = 0.$$

We will make the following basic assumptions for the functions ψ, f and the coefficient functions a and b.

$$(h_{\psi f}) \begin{cases} \psi, \ f \ \subset \mathbb{R} \times \mathbb{R} \text{ are maximal monotone graphs such that} \\ 0 \in \psi(0), f(0), \ \psi, f \text{ are odd}, \ 0 \in \text{Int } D(\psi), \ \text{Int } D(f), \ \psi, \ f \not\equiv 0, \\ \text{and} \ \ 0 \le v_+ < v^*, \quad 0 \le u_+ < u^*, \end{cases}$$